

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A method to facilitate debugging computer code
2 within an operating system kernel, comprising:
 - 3 receiving a an operating system source file containing a data structure
4 definition, wherein the operating system source file contains a plurality of data
5 structures, and wherein the operating system source file is part of an operating
6 system kernel;
 - 7 searching the operating system source file for the data structure definition;
 - 8 upon finding the data structure definition, saving the data structure
9 definition in a storage structure;
 - 10 automatically generating a new operating system source code to display a
11 data structure through execution of a source generator program, wherein the new
12 operating system source code is created using the data structure definition,
13 wherein automatically generating the new operating system source code includes
14 automatically generating source code to walk a linked list of data structures, and
15 wherein generating the new operating system source code involves:
 - 16 examining the plurality of ~~data structures~~ structure
17 definitions in the storage structure to locate a cross-reference
18 between data structures, and
 - 19 generating the new operating system source code for the
20 plurality of data structures;

21 | compiling the new operating system source code into an executable
22 | module;
23 | installing the executable module into a modular debugger; and
24 | during execution of the modular debugger, displaying a content of the data
25 | structure to a user of the modular debugger using the executable module, whereby
26 | the user is able to view the content of the data structure.

1 | 2. (Currently amended) The method of claim 1, wherein receiving the
2 | operating system source file includes receiving a plurality of operating system
3 | source files.

1 | 3 (Canceled).

1 | 4. (Previously presented) The method of claim 1, wherein saving the data
2 | structure definition in the storage structure includes saving the plurality of data
3 | structures in the storage structure.

1 | 5-6 (Canceled).

1 | 7. (Previously presented) The method of claim 1, wherein displaying the
2 | content of the data structure includes displaying the content of the linked list of
3 | data structures.

1 | 8. (Original) The method of claim 1, wherein the data structure definition
2 | includes one of a tree, a linked list, a doubly linked list, and a queue.

1 | 9. (Currently amended) A computer-readable storage medium storing
2 | instructions that when executed by a computer cause the computer to perform a

3 method to facilitate debugging computer code within an operating system kernel,
4 the method comprising:
5 receiving-a an operating system source file containing a data structure
6 definition, wherein the operating system source file contains a plurality of data
7 structures, and wherein the operating system source file is part of an operating
8 system kernel;
9 searching the operating system source file for the data structure definition;
10 upon finding the data structure definition, saving the data structure
11 definition in a storage structure;
12 automatically generating a new operating system source code to display a
13 data structure through execution of a source generator program, wherein the new
14 operating system source code is created using the data structure definition,
15 wherein automatically generating the new operating system source code includes
16 automatically generating source code to walk a linked list of data structures, and
17 wherein generating the new operating system source code involves:
18 examining the plurality of data-~~structures~~ structure
19 definitions in the storage structure to locate a cross-reference
20 between data structures, and
21 generating the new operating system source code for the
22 plurality of data structures;
23 compiling the new operating system source code into an executable
24 module;
25 installing the executable module into a modular debugger; and
26 during execution of the modular debugger, displaying a content of the data
27 structure to a user of the modular debugger using the executable module, whereby
28 the user is able to view the content of the data structure.

1 10. (Currently amended) The computer-readable storage medium of claim
2 9, wherein receiving the operating system source file includes receiving a plurality
3 of operating system source files.

1 11 (Canceled).

1 12. (Previously presented) The computer-readable storage medium of
2 claim 9, wherein saving the data structure definition in the storage structure
3 includes saving the plurality of data structures in the storage structure.

1 13-14 (Canceled).

1 15. (Previously presented) The computer-readable storage medium of
2 claim 9, wherein displaying the content of the data structure includes displaying
3 the content of the linked list of data structures.

1 16. (Original) The computer-readable storage medium of claim 9, wherein
2 the data structure definition includes one of a tree, a linked list, a doubly linked
3 list, and a queue.

1 17. (Currently amended) An apparatus to facilitate debugging computer
2 code within an operating system kernel, comprising:
3 a receiving mechanism that is configured to receive a an operating system
4 source file containing a data structure definition, wherein the operating system
5 source file contains a plurality of data structures, and wherein the operating
6 system source file is part of an operating system kernel;

7 | a search mechanism that is configured to search the operating system
8 | source file for the data structure definition, wherein the search mechanism is
9 | further configured to search the source file for a plurality of data structures;
10 | a saving mechanism that is configured to save the data structure definition
11 | in a storage structure;
12 | an automatic code generating mechanism that is configured to
13 | automatically generate a new operating system source code to display a data
14 | structure through execution of a source generator program, wherein the new
15 | operating system source code is created using the data structure definition;
16 | wherein the automatic code generating mechanism is further configured to
17 | automatically generate source code to walk a linked list of data structures;
18 | an examining mechanism that is configured to examine the plurality of
19 | ~~data-structures~~ structure definitions in the storage structure to locate a cross-
20 | reference between data structures;
21 | wherein the generating mechanism is further configured to generate the
22 | new operating system source code for the plurality of data structures;
23 | a compiling mechanism that is configured to compile the new operating
24 | system source code into an executable module;
25 | an installing mechanism that is configured to install the executable module
26 | into a modular debugger; and
27 | a displaying mechanism that is configured to display a content of the data
28 | structure to a user of the modular debugger using the executable module, whereby
29 | the user is able to view the content of the data structure.

1 | 18. (Currently amended) The apparatus of claim 17, wherein the receiving
2 | mechanism is further configured to receive a plurality of operating system source
3 | files.

1 19 (Canceled).

1 20. (Previously presented) The apparatus of claim 17, wherein the saving
2 mechanism is further configured to save the plurality of data structures in the
3 storage structure.

1 21-22 (Canceled).

1 23. (Previously presented) The apparatus of claim 17, wherein the
2 displaying mechanism is further configured to display the content of the linked list
3 of data structures.

1 24. (Original) The apparatus of claim 17, wherein the data structure
2 definition includes one of a tree, a linked list, a doubly linked list, and a queue.